REMARKS

Status of the Claims

After entry of this amendment, claims 1 and 16-24 are pending. Claims 1 and 18 have been amended. Support for the amendments is found in the specification and claims as originally filed (see, *e.g.*, page 10, line 33 to page 11, line 2). Thus, no new matter is added by these amendments.

Rejection of the Claims under 35 U.S.C. § 102(e)

The claims have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 5,604,114 to White *et al.* or U.S. Patent No. 5,848,710 to Reed *et al.* As amended, the claims are directed to methods for identifying compounds that modulate helicase-dependent p53-mediated apoptosis. To the extent that the rejections apply to the amended claims, Applicants respectfully traverse.

For a rejection of claims under § 102(e) to be properly founded, the Examiner must establish that a single prior art reference discloses each and every element of the claimed invention. *See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Research Found. v. Genetech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). To anticipate an element by inherency, a reference "must make clear that the missing descriptive matter is necessarily present in the thing described in the [primary] reference, and that it would be so recognized by persons of ordinary skill". *See* MPEP 2131.01(III), citing *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). The asserted inherency must be based in fact or technical reasoning "to support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." MPEP §2112. It is important to note that "Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art.". . . *EMI Group North America v. Cypress Semiconductor*, 60 USPQ2d 1423, 1429 (Fed. Cir. 2001).

As discussed in detail below, neither of the cited references anticipate the presently claimed invention, because neither references discloses or suggests each and every element of the claimed methods, either expressly or inherently.

1. Rejection of the claims under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 5,604,114 to White *et al.*

The claims have been rejected as allegedly anticipated by White *et al.* In making this rejection, the Examiner acknowledges that White *et al.* contains no disclosure or suggestion regarding helicases or inhibition of helicase binding to p53, but alleges that the disclosures are inherent in the reference.

White *et al.* discloses that the adenoviral protein E1A induces p53-mediated apoptosis and that some putative oncogenes (*i.e.*, bcl-2, ras, or E1B19K) inhibit p53-mediated apoptosis and describes a screening method to identify compounds that interact with putative oncogenes (*see, e.g.*, col. 13, lines 7-10). As set forth at col. 13, lines 14-19, the screening method of White *et al.* requires contacting test compounds with cells transfected with at least three gene products:

(a) one that induces p53-mediated apoptosis (*e.g.* E1A);

(b) p53; and

(c) one for a putative oncogene (*e.g.*, bcl-2, ras, or E1B19K) that inhibits the effect of (a).

Test compounds that induce apoptosis or cell proliferation are identified as compounds that interact with the putative oncogene. Thus, the methods of White *et al.* are directed toward identifying compounds that interact with putative oncogenes, *i.e.*, to identify compounds interfere with the ability of the putative oncogenes to inhibit p53-mediated apoptosis (*see, e.g.*, col. 7, lines 14-16).

In contrast to White *et al.*, the present claims are directed to methods for identifying modulators of helicase-dependent apoptosis by contacting test compounds with a p53 polypeptide and a helicase polypeptide (*i.e.*, XPB or XPD) and determining whether the compounds inhibit binding between the p53 polypeptide and the helicase polypeptide. As the Examiner has correctly noted, there is no express disclosure or suggestion in White *et al.* of any

helicase or inhibition of helicase binding to p53. White *et al.* is also devoid of any inherent disclosure regarding helicases or inhibition of helicase binding to p53. Prior to the disclosure of the instant specification, it was not known that p53 bound to helicases or that p53-mediated apoptosis could be helicase-dependent. Based on White *et al.*'s disclosure that putative oncogenes can inhibit p53-induced apoptosis, one of skill in the art would have no technical basis to conclude that inhibition of helicase binding to p53 could modulate p53-mediated apoptosis. Without the teachings of the instant specification, one of skill in the art would not be able to extrapolate from White *et al.*'s disclosure that because oncogenes can inhibit p53-induced apoptosis, p53 must necessarily bind a helicase. Thus, White *et al.* does not make it clear to one of skill in the art that that modulators of helicase-dependent p53-mediated apoptosis could be identified by detecting whether a test compound can inhibit p53 binding to helicase as required by the present claims.

Thus, White *et al.* does not disclose each and every element of the presently claimed methods, either expressly or inherently and the reference does not anticipate the invention. Accordingly, Applicants respectfully request withdrawal of this rejection under 35 U.S.C § 102(e).

2. Rejection of the claims under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 5,848,710 to Reed *et al.*

The claims have been rejected as allegedly anticipated by Reed *et al.* In making this rejection, the Examiner acknowledges that Reed *et al.* contains no disclosure or suggestion regarding helicases or inhibition of helicase binding to p53, but alleges that the disclosures are inherent in the reference.

Reed *et al.* discloses two p53 regulatory elements (p53RE): p53-RE^D which is involved in p53-mediated down-regulation of bcl-2 and p53-RE^U which is involved in p53-mediated up-regulation of Bax and describes assays in which the p53RE is linked to a reporter gene and transfected into cells to identify p53 analogs that can induce apoptosis. However, as with White *et al.*, the disclosure of Reed *et al.* provides no technical basis for one of skill in the art to conclude that inhibition of helicase binding to p53 could modulate p53-mediated apoptosis.

Without the teachings of the instant specification, one of skill in the art would not be able to extrapolate from Reed *et al.*'s disclosure that because binding of p53 to particular response elements can modulate p53-induced apoptosis, p53 must necessarily bind a helicase.

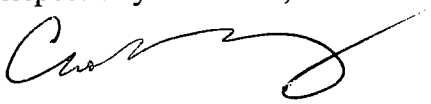
Thus Reed *et al.* does not disclose each and every element of the presently claimed methods, either expressly or inherently and the reference does not anticipate the invention. Accordingly, Applicants respectfully request withdrawal of this rejection under 35 U.S.C § 102(e).

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 925-472-5000.

Respectfully submitted,



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